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amended.
means for creating a second equipotential surface around said means

for creating the first equipotential surface, and

means for separating said first equipotential surface from said second equipotential surface; and

means for supporting said stator winding in at least one of said first slot, said second slot, and said third slot.--

REMARKS

Favorable reconsideration of this application as presently amended and in view of the following discussion is respectfully requested.

Claims 77-158 are pending, Claims 77, 117, 119, and 153 having been amended by way of the present amendment.

In the outstanding Office Action, Claims 77, 117, 119, and 153 were rejected under 35 U.S.C. §112, first paragraph; Claims 77-84, 87-93, 103-112, 116-125, 127, 129, 130, 136, and 153-158 were rejected under 35 U.S.C. §103(a) as being unpatentable over Shildneck (U.S. Patent No. 3,014,139) in view of Elton et al. (U.S. Patent No. 4,853,565, hereinafter Elton), and further in view of Wood (British Patent No. 1,135,242); Claims 85 and 86 were rejected under 35 U.S.C. §103(a) as being unpatentable over Shildneck in view of Elton and Wood, and further in view of Mazzorana (French Patent Nos. 2,594,271 and 2,556,146); Claims 94-102, 126, 128, 131-135, 137-144, and 148-152 were rejected under 35 U.S.C. §103(a) as being unpatentable over Shildneck in view of Elton and Wood, and further in view of Grant (U.S. Patent No. 5,325,008); Claims 113-115 were rejected under 35 U.S.C. §103(a) as being unpatentable over Shildneck in view of Elton and Wood, and further in view of Siemens (British Patent No. 468,827 (erroneously identified in the outstanding Office Action as a German patent)); and Claims 145-147 were rejected under 35 U.S.C. §103(a) as being

unpatentable over Shildneck in view of Elton and Wood, and further in view of Madsen (U.S. Patent No. 3,932,779).

Claims 77, 117, 119, and 153 have been amended by way of the present amendment to address the rejection under 35 U.S.C. §112, first paragraph. Claims 77, 119, and 153 have been amended to remove the limitation requiring that the stator winding form a “continuous full turn winding.” Claims 77, 117, and 119 have been amended to remove the limitation requiring that the solid insulation layer be in “electrical” contact with the first semiconducting layer and the second semiconducting layer. Claims 77, 117, 119, and 153, as amended, are believed to comply with 35 U.S.C. §112, first paragraph, and the outstanding rejection on that basis is believed to have been overcome. No new matter has been added.

The pending independent claims are rejected based on a hypothetical machine having a stator and a stator winding of the machine in Shildneck, but substituting the cable in Elton for the stator winding of Shildneck. Furthermore, the hypothetical machine described in the outstanding Office Action employs inflatable packing means as described in Wood disposed between the stator of Shildneck and the high-voltage cable of Elton. Applicants maintain their traversal of this rejection as set forth in the Amendment filed on March 29, 2001, and the supplemental response filed on April 5, 2001, including the two Declarations filed therewith. The arguments supporting Applicants’ traversal as set forth in the March 29, 2001 Amendment are incorporated herein by reference.

In the outstanding Office Action, the Examiner has indicated that the arguments filed on March 29, 2001, and the Declarations of Mr. Robert Hirt, and Mr. Robert Fenton filed on April 5, 2001, have been fully considered but are not persuasive. It is respectfully submitted that Applicants have provided substantial evidence as to why the asserted combination of Shildneck and Elton is not obvious, whereas no evidence has been provided in the Office Action showing a teaching or motivation to combine the asserted prior art references.

In the recent CAFC decision of *In re Lee*, 61 USPQ2d 1430 (CAFC 2002), the court stressed the requirement for basing obviousness rejections on evidence, and not on conclusory statements made by an Examiner to support a rejection:

When patentability turns on the question of obviousness, the search for and analysis of the prior art includes evidence relevant to the finding of whether there is a teaching, motivation, or suggestion to select and combine the references relied on as evidence of obviousness.¹

...In finding the relevant facts, in assessing the significance of the prior art, and in making the ultimate determination of the issue of obviousness, the Examiner and the Board are presumed to act from [the viewpoint of "the person having ordinary skill in the art to which said subject matter pertains"]. Thus, when they rely on what they assert to be general knowledge to negate patentability, the knowledge must be articulated and placed on the record. The failure to do so is not consistent with either effective administrative procedure or effective judicial review. The board cannot rely on conclusory statements when dealing with particular combinations of prior art and specific claims, but must set forth the rationale on which it relies.²

In the Response to Argument section of the outstanding Office Action, it is recognized that variations of dynamoelectric machines exist that use rounded cables for windings in the stator core. The following questions are then raised:

why would one skilled in the art not apply the semiconducting layers and modify the existing cable to solve an existing and known problem? Or why would one skilled in the art not utilize a cable similar to one disclosed by Elton et al.?³

It is respectfully submitted that it is the burden of the Examiner to produce evidence found in prior art references that would answer these questions, consistent with the CAFC's guidance as set forth in *In re Lee*. It is respectfully submitted that the Examiner has not met this burden. To the contrary, Applicants have provided extensive evidence from experts in

¹ *In re Lee*, 61 USPQ2d 1430, 1433 (CAFC 2002).

² *Id.* at 1435

³ See Office Action dated May 4, 2001, at numbered paragraph 14, page 12.

the dynamoelectric machine art explaining exactly why these combinations would not have been obvious to one of ordinary skill at the time of the present invention.

As a further example that the basis for the outstanding obviousness rejection is not based on evidence, but rather, based on a conclusory statement, it is asserted in the outstanding Office Action that “the rigidity of a conductor cable primarily depends on the type of insulation used.”⁴ Common sense dictates that this cannot be the case. A multi-layer cable will naturally be as rigid as the most rigid layer, whether that layer is the insulation layer, a semiconducting layer, or the conductor itself. Furthermore, the Examiner has rebutted (in our view unsuccessfully) Mr. Fenton’s first hand knowledge that Shildneck describes a conventional low-voltage high current machine. Once again the Examiner’s assertion is unsupported, but Applicant’s position is supported by opinion evidence of a skilled engineer with first hand knowledge of the Shildneck device. It is curious that the Examiner has concluded that since Shildneck discusses disadvantages and limitations of rectangular conductors, that Shildneck, which uses a round cable-type winding, is designed for high-voltage application.⁵

Consequently, it is respectfully submitted that the combination of Shildneck, Elton, and Wood is the product of improper hindsight reasoning based on the teachings of the present application, and is not supported by any evidence indicating a teaching, motivation, or suggestion to select and combine the references. Therefore, it is respectfully submitted that independent Claims 77, 117, 119, and 153, as well as Claims 78-116, 118, and 120-152, respectfully dependent therefrom, patentably define over the proposed combination of Shildneck, Elton, and Wood. Because neither Mazzorana, Grant, Siemens, or Madson cure the deficiencies regarding the proposed combination of Shildneck, Elton, and Wood, it is respectfully submitted that no matter how those references are combined with Shildneck,

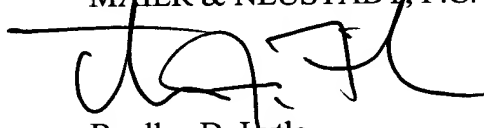
⁴ *Id.*

Elton, and Wood, the combination fails to teach or suggest or invention defined by the pending claims.

Consequently, in view of the present amendment, the previously-filed declarations and arguments, and in light of the foregoing comments, it is respectfully submitted that the invention defined by Claims 77-153, as amended, is definite and patentably distinguishing over the asserted prior art. The present application is therefore believed to be in condition for formal allowance and an early and favorable reconsideration of this application in therefore requested.

Respectfully submitted,

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⁵ *Id.*, at page 13.

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IN THE CLAIMS

Please amend Claims 77, 117, 119, and 153 as follows:

--77. (Twice Amended) A rotating electric machine configured to operate at high-voltages comprising:

a stator having,

a first slot, a second slot, and a third slot;

a stator winding of a high-voltage cable drawn through said first slot, said second slot, and said third slot of said stator [so as to form a continuous full turn of said stator winding],
said high-voltage cable having

an insulation system including

a first semiconducting layer,

a solid insulation layer arranged to surround and be in [electrical]
contact with said first semiconducting layer, and

a second semiconducting layer arranged to surround and be in
[electrical] contact with said solid insulation layer; and

a support member positioned in contact with said stator winding, wherein

said first semiconducting layer and said second semiconducting layer are configured
to provide respective equipotential surfaces.

117. (Twice Amended) A rotating electric machine configured to operate at high-voltages comprising:

a high-voltage magnetic circuit having,

a magnetic core, and
a stator winding of a high-voltage cable, said high-voltage cable having,
a conductor configured to carry electrical current and having respective
strands,
an inner semiconducting layer arranged to surround and be in
[electrical] contact with said conductor,
a solid insulation layer arranged to surround and be in [electrical]
contact with said inner semiconducting layer, and
an outer semiconducting layer arranged to surround and be in
[electrical] contact with said solid insulation layer; and
a support member positioned along and in contact with said stator winding.

119. (Twice Amended) A method for manufacturing a rotating electric machine
configured to operate at high-voltages, comprising the steps of:

forming a winding for a stator by positioning a cable in a first slot, a second slot, and a
third slot of the stator [so as to form a continuous full turn of the winding], said cable being
configured to hold a high-voltage and having

an insulation system including
a first semiconducting layer,
a solid insulation layer arranged to surround and be in [electrical]
contact with said first semiconducting layer, and
a second semiconducting layer arranged to surround and be in
[electrical] contact with said solid insulation layer, said first semiconducting layer and said
second semiconducting layer providing respective equipotential surfaces; and

inserting an elongated support member axially in at least one of said first slot, said second slot, and said third slot and in contact with said cable.

153. (Twice Amended) A rotating electric machine comprising:

a stator having a first slot, a second slot, and a third slot;

a stator winding of a high-voltage cable disposed in said first slot, said second slot, and said third slot [so as to form a continuous full turn of said stator winding], having

means for conducting an electrical current in said high-voltage cable,

means for electrically insulating said means for conducting, said means for electrically insulating having,

means for creating a first equipotential surface around said means for conducting,

means for creating a second equipotential surface around said means for creating the first equipotential surface, and

means for separating said first equipotential surface from said second equipotential surface; and

means for supporting said stator winding in at least one of said first slot, said second slot, and said third slot.--